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County of Los Angeles
CHIEF EXECUTIVE OFFICE
Kenneth Hahn Hall of Administration
500 West Temple Street, Room 713, Los Angeles, California 90012
(213) 974-1101
http://ceo.lacounty.gov

SACHI A. HAMAI
Chief Executive Officer

November 9, 2015

To: Supervisor Michael D. Antonovich, Mayor
Supervisor Hilda L. Solis
Supervisor Mark Ridley-Thomas
Supervisor Sheila Kuehl
Supervisor Don Knabe

From: Sachi A. Hamai
Chief Executive Officer

REPORT ON ESTABLISHING A REVOLVING LOAN FUND FOR WATER CONSERVATION PROJECTS

On September 15, 2015, the Board directed the Chief Executive Officer (CEO), in consultation with the Director of Internal Services Department (ISD), to report back to the Board in 30 days on a proposed funding level, governance model and initial project list (including cost benefit analysis of each specific project) for a Water Conservation Revolving Loan Fund.

Summary

We recommend that $3 million be appropriated over two years, (Fiscal Year (FY) 2016-17 and FY 2017-18) "seed" a Water Revolving Loan Fund (WRLF) to be managed under ISD's County Utilities Budget managed by ISD's County Office of Sustainability (COS).

Based on building characteristic survey information received by ISD from various departments, and based on a water efficiency/conservation estimation tool developed by ISD which predicts total water consumption potential savings across all County facilities, we believe that the initiation of the $3 million WRLF will result in an eventual 106 million gallons in annual water consumption reduction and a cumulative 1.5 billion gallons water reduction in County facilities over 15 years.

Background

On January 26, 2015, ISD submitted a report to the CEO, "Water Savings Opportunities in County Facilities," which estimated the total water consumption and savings opportunities at County facilities. This report is attached for your reference.

The report identified three key areas for water consumption savings: irrigation conversion (lawns and gardens), building plumbing fixtures retrofits, and building cooling tower water chemistry conversions. Since the last quarter of 2014, ISD has been collecting survey information from County departments about their facilities in order to continually refine the tool which predicts water consumption savings opportunities.

The table below, included in the ISD report, predicts total water consumption savings potential in County facilities.

Project Area	Current Water Consumption (billion gallons)	Potential Water Savings (million gallons)	Upgrade Costs	Water Cost Savings (annual)
Plumbing Fixtures	1.347	417	$37,300,00	$2,600,000
Cooling Towers	1.019	59	$2,300,000	$365,000
Landscaping*	0.801	30 gal/sq.ft.	$14-$26 $/sq.ft.	$.02/sq.ft.
TOTAL	3.642	476	$39,600,000	$2,965,000

* No reliable method exists for determining landscaped areas at County facilities. Total potential water savings, cost, and water cost savings are not included above, but will be included as departments provide landscaped area square footage in their survey responses.

If the County were to upgrade all facility cooling towers and building plumbing fixtures to current building code, it would result in 476 million gallons in annual water consumption reduction, or a 13% reduction in baseline consumption, at a cost of nearly $40 million.

Additional water savings would be achieved through conversion of County facility landscaping to drought tolerant landscaping and increases in building behavioral programs which encourage water conservation. Some landscaping projects will be included in the WRLF Program. We recommend that longer-term payback landscaping projects be undertaken by departments under maintenance budgets. On September 15, 2015, the Board authorized departments to implement building behavioral programs in County buildings to reduce water consumption. ISD will work with building proprietors to standardize behavioral program messaging and activities. This will be funded under the water portion of the Centralized Utilities Budget and with nominal funding from the WRLF.

The implementation design and predicted results of the WRLF Program are described below:

County Water Revolving Loan Fund

A WRLF Program provides "seed funding" to departments to implement water saving measures. The measures produce water savings and associated cost savings from reduced water consumption. However, unlike energy efficiency measures, water measures typically have longer payback periods.

The departments implementing the water measures would repay the loans over a prescribed period of time out of their Water Utility Budgets. That is, in addition to paying water utilities for procured water, the departments would also pay an amount under their Water Utilities' Budgets to repay the cost of the water measure. After the first two years of "seed funding," the repayments from measures implemented in those years will provide the funding for implementation of measures in future years.

The proposed WRLF Program criteria is described below:

- "Seed funding" - $1.5 million from the County General Fund in FY 2016-17 and FY 2017-18 (funding is recommended to be split over two years so there will not be a gap in available repayment funding in FY 2017-18 if all seed funding is expended in FY 2016-17.

- Eligible water measures – Cooling tower upgrades, building plumbing fixtures retrofits, landscape conversions, landscape irrigation retrofits.

- Measure restrictions – Simple paybacks less than 20 years (exceptions allowed).

- Measure payback required period – 4 years.

- Program term– 15 years.

The table below describes the predicted impacts of the proposed WRLF Program:

WATER REVOLVING LOAN FUND – 15 YEAR PROGRAM RESULTS					
Total Investment	Funds Reinvested	Annual Water Savings	Annual Cost Savings	Cumulative Water Savings	Cumulative Cost Savings
$12 MM	$9 MM	107 MM gal	$905 K	895 MM gal	$7.4 MM

Using a $3 million investment, and using the Water Utilities Budget to collect water measure repayments for reinvestment into additional water measures over a 15 year period, will result in 107 million gallons in annual water savings (compared to current baseline consumption of 3.6 billion gallons) and a total, cumulative water savings of 895 million gallons.

Attachment 1, "Schedule of Water Measure Projects," is included in this report and shows the County facilities and water measures to be implemented using the program principle and measure repayments. The schedule identifies specific projects only for the first three years of the Program and assumes additional cooling tower, plumbing fixture, and landscape retrofit projects will be identified through further outreach to departments.

Attachment 2, "Water Savings Opportunities in County Facilities," is included in this report. This is the report submitted by ISD to the CEO in January of 2015, and forms the basis for the recommendation to create this Program and for predicting its results.

Conclusion

This proposed WRLF Program can produce significant water reductions in County facilities for an initial investment of $3 million. Utilizing the centralized Water Utilities Budget managed by ISD can ensure incremental, manageable and ongoing reinvestments for additional water measures. This program can be implemented and administered by ISD beginning in the FY2016-17 budget.

Should you have any questions, or require additional information, please contact Jim Jones at (213) 974-8355, or Dave Chittenden of ISD at (323) 267-2103.

SAH:JJ:DC
HC:JY:ef

Attachments

c: Executive Office, Board of Supervisors
County Counsel
Internal Services

Project Information			Estimated Project Cost	Annual Cost Savings	FOS Contingency	Annual Water Savings	Annual Avoided GHG Emissions	Legend
Project Site	Address	Water Provider	Costs of Upgrading	Upgrading Cost Savings	25% of Projects Costs	Water Savings (MG)	GHG Emissions (MTON)	Fixtures
El Monte Comprehensive Health Center	10953 Ramona Blvd., El Monte, CA 91731	City of El Monte Water Dept.	$ 50,000	$ 24,536	$ 12,500	7.2592	3.87	Cooling Towers
DPSS - Metro East District	2855 E. Olympic Blvd., Los Angeles 90023	LADWP	$ 36,650	$ 6,624	$ 9,163	0.5527	4.76	Landscaping
DPSS - Metro Special/Metro IHSS	2707 S. Grand Ave, Los Angeles 90007	LADWP	$ 88,350	$ 14,956	$ 22,088	1.2480	12.75	
DPSS - Lincoln Heights District	4077 N. Mission Rd., Los Angeles	LADWP	$ 28,100	$ 3,697	$ 7,025	0.3085	2.65	
DPSS - Civic Center District	813 E. 4th Pl., Los Angeles 90013	LADWP	$ 50,000	$ 8,031	$ 12,500	0.6701	1.04	
Registrar-Recorder/County Clerk, Main Office	12400 Imperial Hwy., Norwalk, CA 90650	Golden State Wtr (Norwalk)	$ 107,100	$ 11,388	$ 26,775	2.0899	11.29	
DPSS - Compton District	211 E Alondra Blvd., Compton 90220	City of Compton (Municipal Water Dept.)	$ 31,250	$ 3,230	$ 7,813	0.7820	6.69	
DPSS - South Central District	10728 S Central Ave, Los Angeles	LADWP	$ 9,200	$ 1,053	$ 2,300	0.0879	0.14	
DPSS - Adams & Grand Building	2615 S. Grand Ave., Los Angeles, 90007	LADWP	$ 176,850	$ 15,324	$ 44,213	1.2787	9.67	
DPSS - Florence District	1740 E. Gage Ave., Los Angeles	Golden State Wtr (Florence-Graham)	$ 33,400	$ 3,037	$ 8,350	0.5574	4.70	
Hall of Records	320 W. Temple St., Los Angeles, CA 90012	LADWP	$ 148,500	$ 10,912	$ 37,125	0.9106	6.00	
Probation Headquarters	90242	City of Downey	$ 50,000	$ 4,199	$ 12,500	1.302	0.69	
Olive View Hospital	91342	LADWP	$ 1,148,000	$ 85,619	$ 287,000	7.1445	39.16	
Downtown MHC	529 Maple Ave. South, Los Angeles, CA 90013	LADWP	$ 4,600	$ 368	$ 1,150	0.0307	0.05	
DPSS - Civic Center District	813 E. 4th Pl., Los Angeles 90013	LADWP	$ 9,200	$ 692	$ 2,300	0.0577	0.09	
DPSS - Cudahy District	8130 S. Atlantic Ave., Cudahy	Tract 180 Water Co	$ 31,750	$ 2,144	$ 7,938	0.6217	4.72	
Edmund D. Edelman Westside MHC	Angeles, CA 90064	LADWP	$ 13,950	$ 992	$ 3,488	0.0827	1.38	
DPSS - Pomona District	2040 W. Holt Ave., Pomona 91768	City of Pomona	$ 42,850	$ 2,493	$ 10,713	0.7868	2.65	
DPSS - Belvedere District	5445 Whittier Blvd., Los Angeles	Cal Water (ELA)	$ 10,350	$ 565	$ 2,588	0.1119	0.15	
Kenneth Hahn Hall of Administration	500 W. Temple St., Los Angeles, CA 90012	LADWP	$ 837,000	$ 32,554	$ 209,250	2.7165	17.90	
Internal Services Department Headquarters	1100 N. Eastern Ave., East Los Angeles, CA 90063	Cal Water (ELA)	$ 19,850	$ 727	$ 4,963	0.1442	3.23	
Landscaping Projects			$ 2,167,296	$ 67,695	$ 541,824	17.3970	50.74	
Fixtures Projects			$ 4,890,750	$ 605,130	$ 1,222,688	60.4957	549.22	
		Total	**$ 9,984,996**	**$ 905,967**	**$ 2,496,249**	**106.64**	**733.53**	

County of Los Angeles
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JIM JONES
Director

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"To enrich lives through effective and caring service"

January 26, 2015

To: Sachi A. Hamai
Interim Chief Executive Officer

From: Dave Chittenden
Chief Deputy Director DC

Subject: **UPDATE ON COUNTY WATER CONSERVATION PROGRAM**

Executive Summary

The County's water conservation efforts to date have revealed significant water savings potential, however, unlike energy saving projects, water conservation measures are very rarely self-funding. This memo describes the range of costs for the most common water saving measures at County Facilities. The total countywide capital requirements appears daunting, but by taking an incremental approach an initial investment of $1 million can spur departmental innovators and early adopters into action on water conservation and lead to additional efforts to help achieve the County's long-term water saving goals.

Water Survey and Analysis

On October 21, 2014, ISD provided a memorandum to the Chief Executive Officer describing the measures that could be undertaken by County departments and their facility managers in support of a broad, water conservation effort across all County buildings. This memorandum provides an update on how ISD will integrate these measures into existing programs administered by its Facilities Operations Service (FOS) and County Office of Sustainability (COS).

ISD's FOS will continue to ensure all ISD maintained facilities are compliant with State Water Resources Board restrictions on water usage for landscaping. FOS reports that it has made changes to many systems in order to accommodate the restrictions of over 85 different local water purveyors. ISD FOS is working toward developing a broader proposed restriction for use County-wide using the more rigorous restrictions of each separate different water purveyor within the County of Los Angeles.

ISD's COS will integrate a water conservation program into its ongoing Energy Management and Green Building Services Programs. Services include outreach to departments, provision of technical support and services, assistance in identifying external funding and incentives, and reporting results through the County's sustainability website or other online reporting tools.

Significant reductions in water consumption in County facilities can be achieved through upgrades in three major areas: use of efficient plumbing fixtures, upgrades to campus and building cooling towers, and landscaping irrigation improvements.

In October, ISD's COS distributed a survey to the County's major energy users group and ISD's FOS Facilities Managers. The survey requested information on facility water consumption and equipment status on the three major systems listed above. Those responses, in conjunction with best practices data available on upgrades to those systems, provide an indication of the potential costs and benefits of implementing a widespread water conservation program in County facilities.

Survey Responses and Results

COS received survey responses covering 14 facilities and totaling over 2.3 million square feet (SF) of occupied building space. In total, 9 County departments are represented in the survey response analysis and include 14 different buildings/sites. An analysis of the potential water savings in these facilities is contained below. These 14 sites may be viewed as a representative sampling of all County sites and, with an analysis described later, provides an additional benchmark for water savings that may be achieved in larger facilities within the County.

FOS and COS will continue to work through its Energy Management and Green Building Services Programs within the newly proposed County Sustainability Policy Team. The Team will help identify water savings opportunities in additional County buildings and sites, develop a formal methodology for distribution of water conservation information, and collect responses and results on the implementation of measures.

Figure 1 below provides a summary of the costs and benefits of the three water conservation measures at the 14 facilities that responded to the survey. The facilities that responded are included as an attachment to this memorandum.

Figure 1 – Annual Cost-Benefit for Surveyed Sites

Project Area	Current Water Consumption (Million Gallons)*	Water Savings** (Million Gallons)	Upgrade Costs	Cost Savings (First Year)***	GHG Reduced (Metric Ton)
Plumbing Fixtures	50.8MG	17.4 MG	$2,689,350	$120,108	99.2m-ton
Cooling Towers	30.13MG	16.4 MG	$400,000	$89,785	16.7m-ton
Landscaping	9.09MG	8.0 MG	$5,652,343	$42,650	13.9m-ton
TOTAL	204.0 MG	41.8 MG	$8,741,693	$252,543	129.8m-ton

* The total baseline is calculated from water bills paid by ISD for the surveyed sites. While these three end uses account for a majority of building water consumption, they do not account for all uses of water in surveyed buildings.

** Source for Water Reduction Calculations:

Upgrading Plumbing Fixtures

ISD utilized one of the U.S. Green Building Council's "LEED" (Leadership in Energy and Environmental Design) tools, an indoor water usage calculator, to determine the baseline indoor water usage for each facility. Site-specific variables including: site occupancy, annual days of operation, and number and types of indoor plumbing fixtures, were then used to calculate water savings potential from this upgrade.

Upgrading Cooling Towers
ISD applied data from the US Environmental Protection on water usage in cooling towers as a standard and compared recent actual water use with ASHRAE-ANSI (American Society of Heating, Refrigerating and Air Conditioning Engineers-American National Standards Institute) engineering standards to determine the water savings potential at County facilities with cooling towers.

Converting Non-recreational Turf to Drought-tolerant Landscaping
ISD referenced existing records at the 14 facilities coupled with, where applicable, GIS applications, to obtain the square footage of any non-recreational turf grass maintained. The local climate zone and water use baselines from the California Department of Water Resources' (DWR) "Guide to Estimating Irrigation Water Needs of Landscape Plantings in California." were used to establish water savings potential, costs and benefits from this upgrade.

*** GHG and annual cost savings depend on Energy Intensity (EI) and cost per unit for each site from specific water providers.

Development of Countywide Water Savings Potential, Cost and Benefits

COS developed a water-use disaggregation and analysis tool to assess usage by volume and square footage for different water conservation measures for all County buildings. This tool was then calibrated against the survey data collected and used to produce County-specific building factors that can be applied to the larger, overall facility inventory.

This tool will streamline future assessments at other County facilities, and enable COS to record and monitor water-energy savings, and calculate costs and benefits of all facility water upgrades.

Figure 2 describes the potential costs and benefits for plumbing fixture and cooling tower upgrades only. There is no current database that has the recorded

non-recreational landscaping area of all County facilities; therefore the landscaping measures are excluded from the totals. Water and cost savings factors (per square foot) for landscape irrigation are provided.

Figure 2 – Annual Cost-Benefit for Countywide Facilities

Project Area	Current Water Consumption (Billion Gallons)	Water Savings (Million Gallons)	Cost	Cost Savings (First Year)	GHG Reduced (Metric-Ton)
Plumbing Fixtures	1.347BG	417MG	$37,300,000	$2,600,000	2558 m-ton
Cooling Towers	1.019BG	58.7MG	$2,300,000	$364,883	90 m-ton
Landscaping	.801BG	30gal/sqft	13.94-26.33 $/sqft	$0.02/sqft	0.000046 m-ton/sqft
TOTAL	3.642BG	475.7MG	$39,600,000	$2,964,883	2,648 m-ton

Overall, if ISD were to enhance plumbing fixtures and upgrade cooling towers Countywide, the annual water savings would be 475.7MG, or a 13% reduction. The benefits of avoiding future water rate increases, and the economic and environmental benefits are significant.

Implementing a Countywide Water Conservation Program

ISD suggests that a Countywide water conservation program is unlikely to achieve significant, long-term results through a one-time, modest investment of Net County Cost (NCC) by the CEO. Nor would a one-time investment of Deferred Maintenance or departments' Unmet Needs achieve significant long-term results.

Rather, ISD recommends that a long-term, Countywide water conservation program should be implemented and managed similar to ISD's Energy Management Program which utilizes an ongoing NCC contribution of $3 million per year managed by ISD's Energy Management Division (EMD). EMD then supplements the $3 million funding with additional sources; e.g., departments' own maintenance/operations budget contributions, utility incentives and rebates, grant funding sources, and ISD's Energy Investment Plan (a "revolving loan" program seeded with grant funding and replenished with actual savings realized from the energy projects implemented).

ISD recommends that a similar program be established for water conservation and efficiency in water consumption in County buildings. Instead of one-time-only NCC funding for water savings in County buildings, ISD will request NCC funding of $1 million annually to leverage other funding sources as is done under ISD's Energy Management Program. Initially these funds will be used for improvement projects identified in the aforementioned survey.

As noted, ISD would assist departments with acquiring water utility incentives, grants or other sources (like ISD's Energy Investment Financing program) to help reduce the departments' share of implementing these projects.

For example, ISD has already applied for the California Department of Water Resources' (DWR) Water-Energy Grant Program for funds to implement water efficiency programs or projects that reduce greenhouse gas emissions, and reduce water-energy waste within environmentally disadvantaged communities. ISD's COS submitted an application proposal to the DWR for this grant on December 12, 2014 requesting the maximum award of $2.5M for projects in County facilities located in environmentally disadvantaged communities. A list of potential projects targeted for these funds are also included in the attachment (Attachment B) to this memorandum. Funding recommendations from the DWR will occur in March 2015. This grant, if awarded, could be used right away, along with the other funding sources mentioned above, to implement water savings projects over the long term.

If you have any questions, please contact me at (323) 267-2103 or Aaron Klemm at (323) 267-3971.

AK/HC/DC:sg
Attachments

c: Jim Jones, COO
Gevork Simdjian, CEO
Tom Tindall, CEO
Brad Bolger, CEO
Howard Choy
Paul English
Aaron Klemm

ATTACHMENT A

Survey Respondents

LA County Facility	Address	Program Area Upgrades		
		Plumbing Fixtures	Cooling Towers	Landscaping
A.C. Bilbrew Library	150 E. El Segundo Blvd., Los Angeles CA 90061			X
Century Regional Detention Facility (CRDF)	11705 South Alameda, Lynwood, CA 90262	X	X	X
Department Agricultural Commissioner/Weights & Measures, Headquarters	12300 Lower Azusa Rd., Arcadia, CA 91006	X		
Department of Probation, Headquarters	9150 E. Imperial Hwy., Downey, CA 90242	X	X	
Department of Public Social Services - Adams & Grand Complex	2615 & 2707 S. Grand Ave., Los Angeles, CA 90007	X	X	
El Monte Comprehensive Health Center	10953 Ramona Blvd, El Monte, CA 91731		X	
Fire Station 118	17056 Gale Ave., City of Industry, CA 91748			X
Hall of Records	320 W. Temple St., Los Angeles, CA 90012	X		
Internal Services Department	1100 N. Eastern Ave., East Los Angeles, CA 90063	X		X
Kenneth Hahn Hall of Administration	500 W. Temple St., Los Angeles, CA 90012	X		
Library Headquarters	7400 E. Imperial Hwy, Downey, CA 90242			X
Men's Central Jail (MCJ)	441 Bauchet Street, Los Angeles, CA 90012	X		X
North County Correctional Facility (NCCF)	29340 The Old Road, Castaic, CA 91384	X	X	X
Norwalk Library (South County Headquarters)	12350 Imperial Hwy, Norwalk, CA 90650			X
Olive View Hospital	14445 Olive View Dr., Sylmar, CA 91342	X	X	X
Registrar-Recorder/County Clerk, Main Office	12400 Imperial Hwy, Norwalk, CA 90650	X		X
Sheriff's Headquarters Building (SHQ)	4700 Ramona Blvd., Monterey Park, CA 91754	X	X	X
Treasurer/Tax Collector	16610 Chestnut, City of Industry, CA 91748			X
Twin Towers Correctional Facility (TTCF)	450 Bauchet Street, Los Angeles, CA 90012	X	X	X

ATTACHMENT B

DWR Grant Target Facilities

LA County Facility	Address	Program Area Upgrades		
		Plumbing Fixtures	Cooling Towers	Landscaping
Department Agricultural Commissioner/ Weights & Measures Headquarters	12300 Lower Azusa Rd., Arcadia, CA 91006	X		
Department of Probation, Headquarters	9150 E. Imperial Hwy., Downey, CA 90242	X	X	
Department of Public Social Services - Adams & Grand Complex	2615 & 2707 S. Grand Ave., Los Angeles, CA 90007	X	X	
El Monte Comprehensive Health Center	10953 Ramona Blvd, El Monte, CA 91731		X	
Hall of Records	320 W. Temple St., Los Angeles, CA 90012	X		X
Internal Services Department	1100 N. Eastern Ave., East Los Angeles, CA 90063	X		X
Kenneth Hahn Hall of Administration	500 W. Temple St., Los Angeles, CA 90012	X		
Registrar-Recorder/County Clerk, Main Office	12400 Imperial Hwy, Norwalk, CA 90650	X		X

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

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December 22, 2015

IN REPLY PLEASE
REFER TO FILE: WM-0
A4362

TO: Each Supervisor

FROM: Gail Farber
Director of Public Works

BOARD MOTION OF SEPTEMBER 15, 2015, AGENDA ITEM NO. 59
REPORT ON THE COUNTY'S PROGRESS TOWARD IMPLEMENTING RECYCLED WATER

On September 15, 2015, the Board instructed the Chief Executive Officer, the Directors of Public Works, Internal Services, Planning, Parks and Recreation, and the Interim Director of Public Health to report back on the following:

- An updated status on the Office of Water Recycling within the Department of Public Works, and the County's progress toward implementing the policies, projects, and priorities established by the Board and identified in the reports from the County Water Recycling Task Force and County Office of Water Recycling, dated January 30, 2007, and February 2, 2009, with recommendations to improve the effectiveness and delivery of recycled water infrastructure to meet Countywide needs, including a report on how recycled water may be delivered by implementing or enhancing irrigation systems or by trucking recycled water to County landscaped medians, parkways, and Landscape Maintenance Districts, to maintain the health of trees, plants, and flowers to support important ecosystems.

- A recycled water action plan, developed in collaboration with the County Sustainability Council, with updated cost estimates and timelines for implementation.

- Instructed the Director of Public Works to provide a report to the Board on the health of existing trees within the County.

In addition, the Board instructed the Directors of Public Works and Planning to provide them with a protocol related to permit fees for gray water usage and to develop an implementation program for streamlining the review and approvals process for

residential gray water systems, with development of an information pamphlet to consumers interested in implementing such systems at their residences.

Office of Water Recycling and the County's progress in implementing recycled water

A Recycled Water Task Force was created by the Board in 2006 to explore the expanded use of recycled water both at County facilities and throughout the region in order to increase local water supply sustainability. At the time, the Board observed a need for regional leadership for this issue and directed Public Works to bring together affected agencies and get them working toward expanded recycled water service for the region. Shortly afterward, a report was submitted to the Board on January 30, 2007, summarizing opportunities to achieve this goal, which included establishing the Office of Water Recycling. That report was followed up with a second report on February 2, 2009, listing County facilities with potential for recycled water service. In the years following, sanitation agencies, water agencies, and the County have utilized the Integrated Regional Water Management framework to engage in collaborative planning and greatly increase the amount of recycled water used throughout the region. At the same time, professional trade groups such as the WateReuse Association have helped organize the region and make significant progress in legislative advocacy, applied research, policy development, and educational tools associated with recycled water.

These efforts have led to significant progress in the expansion of recycled water use. Pipelines have been constructed to serve County parks and other County facilities, as well as numerous other facilities throughout the region such as oil refineries, cemeteries, and other land uses. Regulations and permitting requirements have also been eased, which have expanded the uses of recycled water. Infrastructure and regulatory improvements have given groundwater management agencies the ability to increase the allowable percentage of recycled water recharged into groundwater basins. The Seawater Barriers operated by Public Works to protect coastal groundwater basins from seawater intrusion are moving toward 100 percent use of recycled water. Presently, the Seawater Barriers use 17,000 acre-feet on average annually, which is approximately 53 percent of the total water used.

Looking at the region as a whole, use of recycled water has increased by a third since 2008 (Figure 1). Currently, 160,000 acre-feet of annual water demand is met through recycled water. This represents approximately 5 percent of the region's water portfolio (Figure 2). Agencies are collaborating through the Integrated Regional Water Management program to further develop projects to increase recycled water usage. The joint Bureau of Reclamation-Los Angeles County Flood Control District Los Angeles

Basin Stormwater Conservation Study is also identifying opportunities for increased water reuse.

The region has also been very productive financially. To date, local recycled water supply agencies have been awarded over $30 million in grants from the State for 13 recycled water projects totaling over $260 million to supply 35,000 acre-feet per year of recycled water. See Attachment A for details.

Recently, the Metropolitan Water District of Southern California announced a partnership with the Sanitation Districts of Los Angeles County to purify secondary effluent from the Joint Water Pollution Control Plant in the City of Carson to produce advanced treated recycled water and deliver the treated water for groundwater replenishment throughout Los Angeles, Orange, and San Bernardino Counties. Reports indicate this project would produce enough water to meet the annual needs of 1.4 million people. Public Works intends to work with the Metropolitan Water District of Southern California, Sanitation Districts, and others on the development of this project.

The business model for providing recycled water involves sanitation agencies purifying wastewater and then water agencies purchasing that purified recycled water and distributing/selling it to individual customers. It is extremely expensive to build the transmission infrastructure to distribute the recycled water and typically only the larger water agencies that have the financial resources and customer base to make it cost-effective. These water agencies have to carefully evaluate potential demand and identify customers from a geographic area before they commit the extensive financial resources to building the infrastructure. In many cases, providing recycled water to communities is cost-prohibitive. Grants can help with this situation, but funding is limited. In some cases, progressive agencies like the County of Los Angeles will build facilities to be able to accept recycled water in anticipation of recycled water becoming available at some future date.

Land use agencies such as the County and municipalities work with water agencies to identify potential customers and expand the use of recycled water. In 2009, a committee comprised of staff from the Departments of Public Works, Parks and Recreation, and Internal Services, as well as the Chief Executive Office, completed a report, which prioritized County facilities for conversion to recycled water. Since then, Pathfinder Park, Rimgrove Park, and the Los Amigos Golf Course have been converted to recycled water. Parks and Recreation is working with the West Basin Municipal Water District to develop a feasibility study funded through Proposition 1 to look at extending recycled water use to Kenneth Hahn State Recreation Area and Ladera Park. The report is scheduled to be completed by February 2016. Additionally, Internal

Services Department facilities that were converted to recycled water include Camp Gonzales, Registrar-Recorder/County Clerk in Norwalk, Norwalk Library, and the Internal Services Department Car Wash at the Eastern Avenue Complex.

Over the past several months, the County Sustainability Council, comprised of staff from various County departments, has met in response to the Statewide Mandatory Water Reductions to strategize ways to conserve water at County facilities. One strategy involves improving coordination with recycled water supply agencies to identify feasible projects that can connect County facilities to recycled water, hiring consultants to develop new cost estimates for extending recycled water service, and prioritizing facilities for conversion to recycled water based on the economic and technical feasibilities.

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Attach.

cc: Chief Executive Office (Rochelle Goff)
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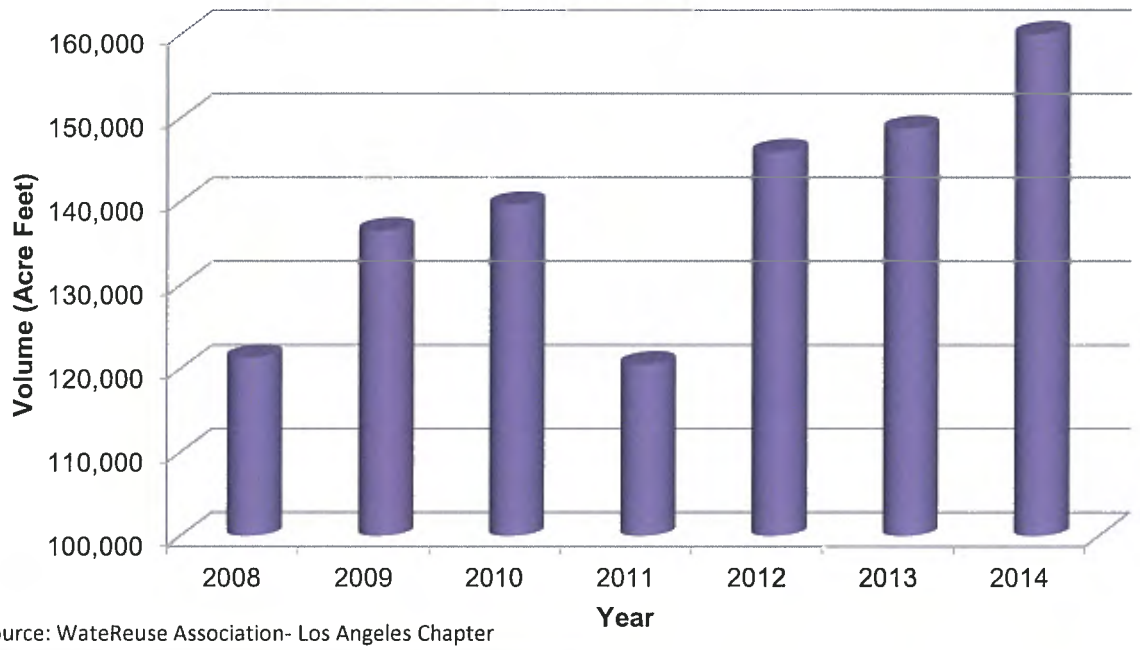
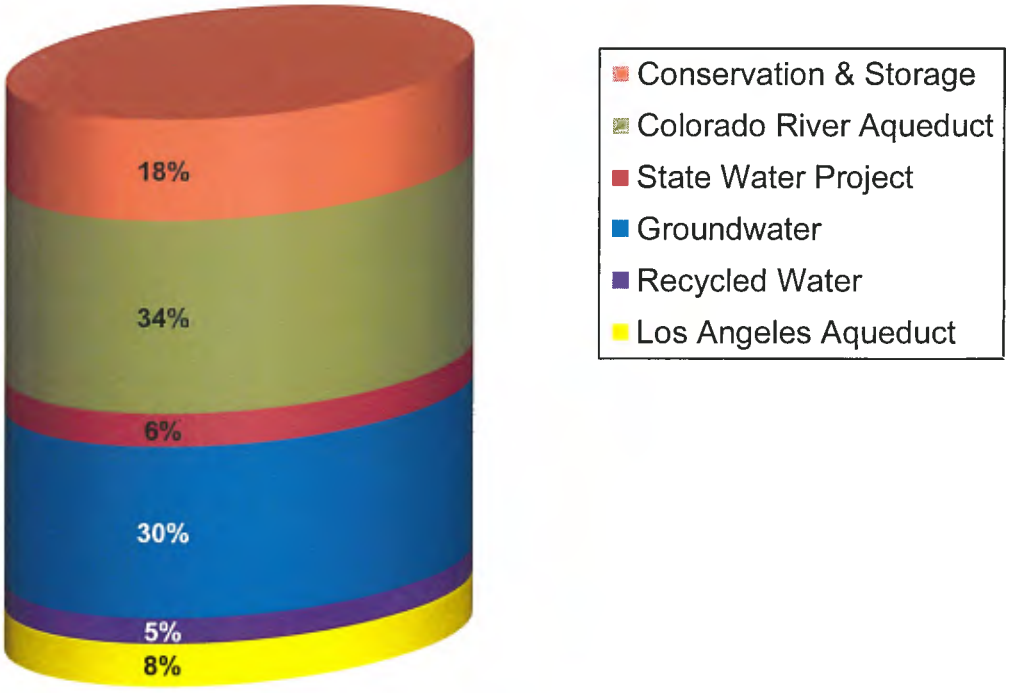
Figure 1: Greater Los Angeles County Recycled Water Usage



Source: WateReuse Association- Los Angeles Chapter

Figure 2: Los Angeles County 2015 Water Supply



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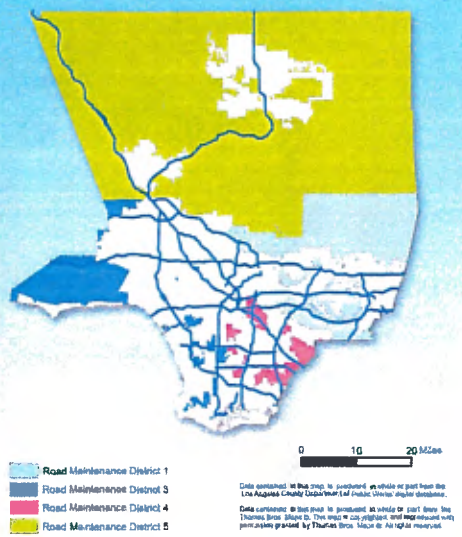
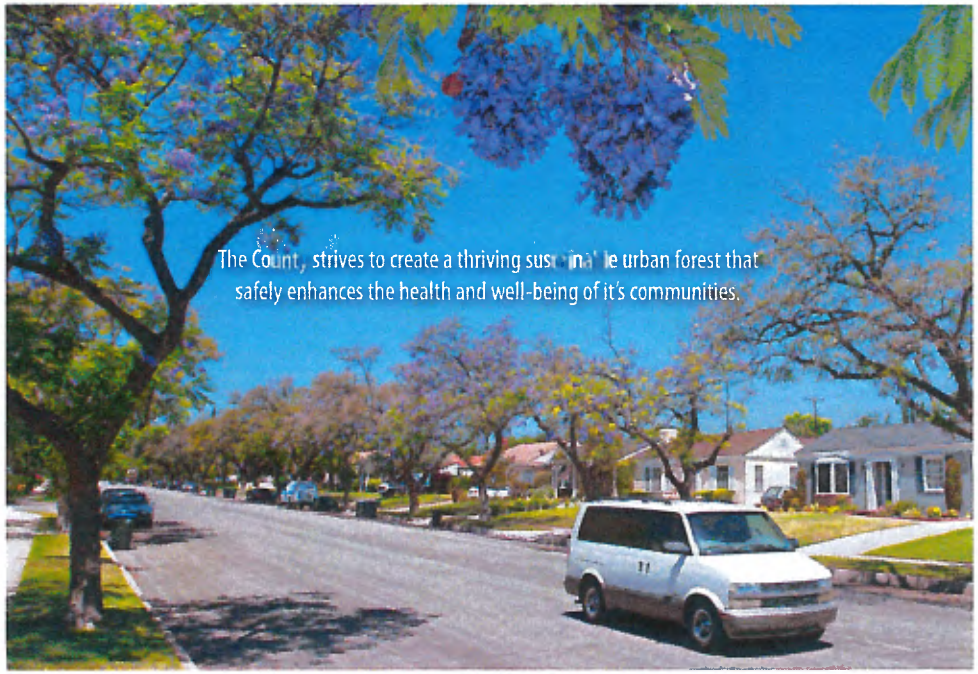
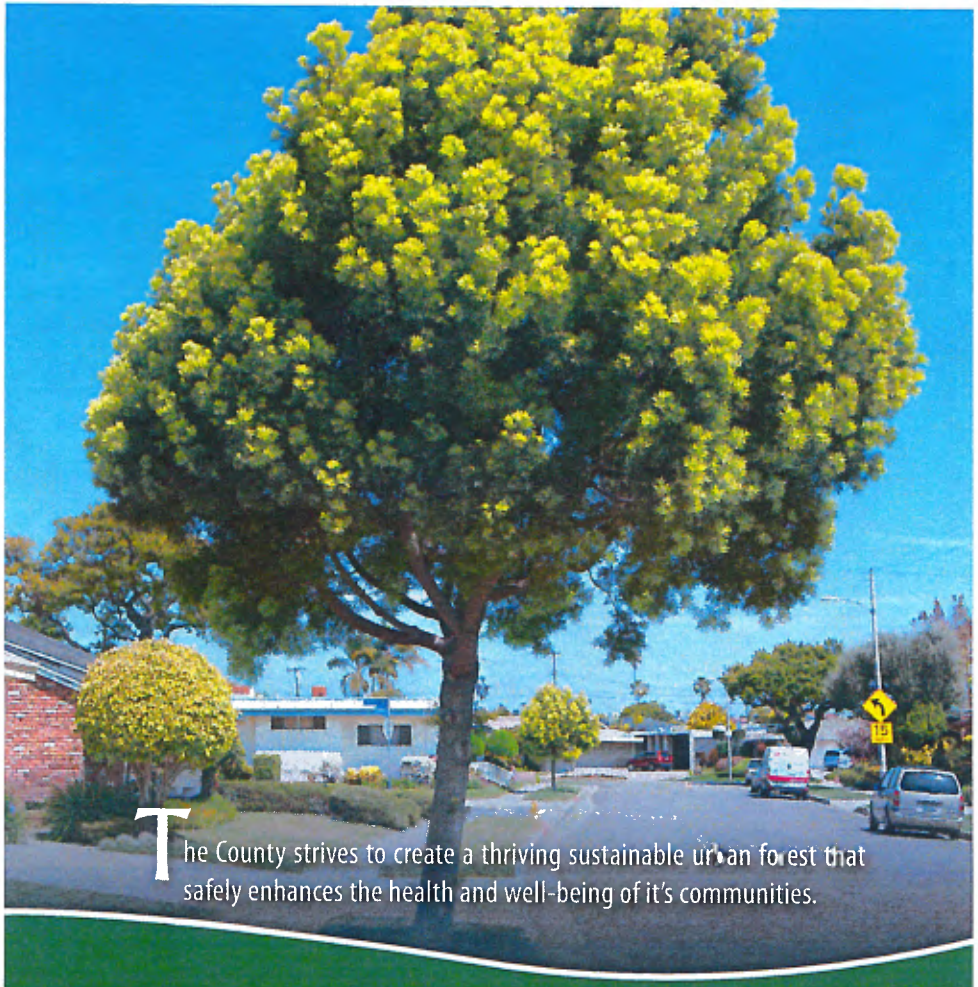




Los Angeles County Department of Public Works

CARING FOR THE COUNTY'S URBAN FOREST

October 2015
dpw.lacounty.gov



The County strives to create a thriving sustainable urban forest that safely enhances the health and well-being of it's communities.

Parkway and median trees are part of Los Angeles County's urban forest, which is an essential element of a healthy, livable community. A well-managed, thriving urban forest is vital to our region's future.

Since October 1983, Public Works has cared for and maintained over 170,000 parkway and median trees located throughout the County's unincorporated area along more than 3,000 miles of roadways. Public Works recently took over the maintenance of approximately 1,400 additional trees within road right of way in various Landscape Maintenance Districts.

Urban Forest Renewal

Creating a sustainable urban forest is only possible through a collaborative partnership with the communities the County serves.

How you can help:

- If you do not have a tree planted in the parkway in front of your home, request Public Works to plant one.
- Water the parkway tree in front of your home.
- Report concerns to Public Works about dead or dying parkway trees.

For more information on any of these items, please visit Public Works at dpw.lacounty.gov/rmd/parkways.

Challenges and Opportunities

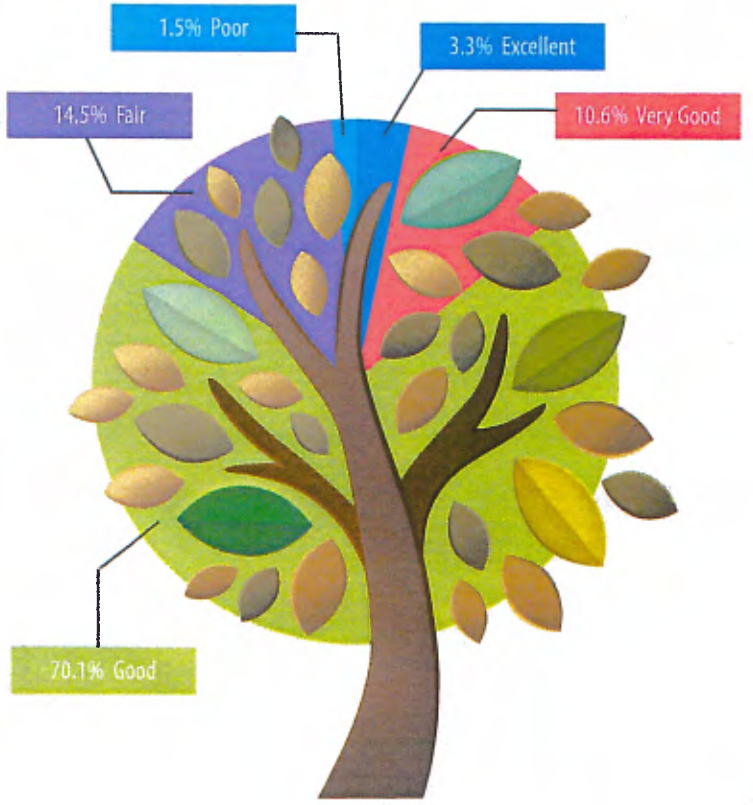
Many of the County's trees are reaching the end of their lives and are stressed due to lack of water caused by the State's drought. While the majority of the County's urban forest is in good to excellent condition, several of these factors have impacted the health of some of the trees which makes them susceptible to various pests and fungus infestations. Therefore, to better balance the health of the County's trees with it's goal of public safety, Public Works is increasing it's focus on urban forest renewal.

Trees are replanted routinely with species that are appropriate for the available space and other factors that complement the existing trees and the community when possible. Public Works takes advantage of drought tolerant species to help counteract the effects of climate change.

Benefits of a Healthy Urban Forest

* Clean air
* Heat reduction
* Stormwater capture
* Improved community walkability
* Increased property value
* Noise suppression
* Habitat for wildlife
* Increase well-being

Condition of Parkway Trees in Los Angeles County's Urban Forest



Trees were rated as being in poor condition and noted for continued monitoring if there was potential for recovery. Public Works will continue to evaluate those trees and upgrade their condition assessment if there is improvement or remove those than have declined in condition. The number of trees in poor condition are shown below for each of the Supervisorial Districts (SD) along with the corresponding percentage of the total number of trees in that SD.

SD1 – 330 trees (1.4%), SD2 – 430 trees (1.7%), SD3 – 275 trees (1.3%), SD4 – 320 trees (1.1%), SD5 – 1,110 trees (1.6%)

Condition ratings are performed prior to trees being trimmed.

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

December 22, 2015

IN REPLY PLEASE
REFER TO FILE: WM-0
A4362

TO: Each Supervisor

FROM: Gail Farber
Director of Public Works

BOARD MOTION OF SEPTEMBER 15, 2015, AGENDA ITEM NO. 59
REPORT ON THE COUNTY'S PROGRESS TOWARD IMPLEMENTING RECYCLED WATER

On September 15, 2015, the Board instructed the Chief Executive Officer, the Directors of Public Works, Internal Services, Planning, Parks and Recreation, and the Interim Director of Public Health to report back on the following:

- An updated status on the Office of Water Recycling within the Department of Public Works, and the County's progress toward implementing the policies, projects, and priorities established by the Board and identified in the reports from the County Water Recycling Task Force and County Office of Water Recycling, dated January 30, 2007, and February 2, 2009, with recommendations to improve the effectiveness and delivery of recycled water infrastructure to meet Countywide needs, including a report on how recycled water may be delivered by implementing or enhancing irrigation systems or by trucking recycled water to County landscaped medians, parkways, and Landscape Maintenance Districts, to maintain the health of trees, plants, and flowers to support important ecosystems.

- A recycled water action plan, developed in collaboration with the County Sustainability Council, with updated cost estimates and timelines for implementation.

- Instructed the Director of Public Works to provide a report to the Board on the health of existing trees within the County.

In addition, the Board instructed the Directors of Public Works and Planning to provide them with a protocol related to permit fees for gray water usage and to develop an implementation program for streamlining the review and approvals process for

residential gray water systems, with development of an information pamphlet to consumers interested in implementing such systems at their residences.

Office of Water Recycling and the County's progress in implementing recycled water

A Recycled Water Task Force was created by the Board in 2006 to explore the expanded use of recycled water both at County facilities and throughout the region in order to increase local water supply sustainability. At the time, the Board observed a need for regional leadership for this issue and directed Public Works to bring together affected agencies and get them working toward expanded recycled water service for the region. Shortly afterward, a report was submitted to the Board on January 30, 2007, summarizing opportunities to achieve this goal, which included establishing the Office of Water Recycling. That report was followed up with a second report on February 2, 2009, listing County facilities with potential for recycled water service. In the years following, sanitation agencies, water agencies, and the County have utilized the Integrated Regional Water Management framework to engage in collaborative planning and greatly increase the amount of recycled water used throughout the region. At the same time, professional trade groups such as the WateReuse Association have helped organize the region and make significant progress in legislative advocacy, applied research, policy development, and educational tools associated with recycled water.

These efforts have led to significant progress in the expansion of recycled water use. Pipelines have been constructed to serve County parks and other County facilities, as well as numerous other facilities throughout the region such as oil refineries, cemeteries, and other land uses. Regulations and permitting requirements have also been eased, which have expanded the uses of recycled water. Infrastructure and regulatory improvements have given groundwater management agencies the ability to increase the allowable percentage of recycled water recharged into groundwater basins. The Seawater Barriers operated by Public Works to protect coastal groundwater basins from seawater intrusion are moving toward 100 percent use of recycled water. Presently, the Seawater Barriers use 17,000 acre-feet on average annually, which is approximately 53 percent of the total water used.

Looking at the region as a whole, use of recycled water has increased by a third since 2008 (Figure 1). Currently, 160,000 acre-feet of annual water demand is met through recycled water. This represents approximately 5 percent of the region's water portfolio (Figure 2). Agencies are collaborating through the Integrated Regional Water Management program to further develop projects to increase recycled water usage. The joint Bureau of Reclamation-Los Angeles County Flood Control District Los Angeles

Basin Stormwater Conservation Study is also identifying opportunities for increased water reuse.

The region has also been very productive financially. To date, local recycled water supply agencies have been awarded over $30 million in grants from the State for 13 recycled water projects totaling over $260 million to supply 35,000 acre-feet per year of recycled water. See Attachment A for details.

Recently, the Metropolitan Water District of Southern California announced a partnership with the Sanitation Districts of Los Angeles County to purify secondary effluent from the Joint Water Pollution Control Plant in the City of Carson to produce advanced treated recycled water and deliver the treated water for groundwater replenishment throughout Los Angeles, Orange, and San Bernardino Counties. Reports indicate this project would produce enough water to meet the annual needs of 1.4 million people. Public Works intends to work with the Metropolitan Water District of Southern California, Sanitation Districts, and others on the development of this project.

The business model for providing recycled water involves sanitation agencies purifying wastewater and then water agencies purchasing that purified recycled water and distributing/selling it to individual customers. It is extremely expensive to build the transmission infrastructure to distribute the recycled water and typically only the larger water agencies that have the financial resources and customer base to make it cost-effective. These water agencies have to carefully evaluate potential demand and identify customers from a geographic area before they commit the extensive financial resources to building the infrastructure. In many cases, providing recycled water to communities is cost-prohibitive. Grants can help with this situation, but funding is limited. In some cases, progressive agencies like the County of Los Angeles will build facilities to be able to accept recycled water in anticipation of recycled water becoming available at some future date.

Land use agencies such as the County and municipalities work with water agencies to identify potential customers and expand the use of recycled water. In 2009, a committee comprised of staff from the Departments of Public Works, Parks and Recreation, and Internal Services, as well as the Chief Executive Office, completed a report, which prioritized County facilities for conversion to recycled water. Since then, Pathfinder Park, Rimgrove Park, and the Los Amigos Golf Course have been converted to recycled water. Parks and Recreation is working with the West Basin Municipal Water District to develop a feasibility study funded through Proposition 1 to look at extending recycled water use to Kenneth Hahn State Recreation Area and Ladera Park. The report is scheduled to be completed by February 2016. Additionally, Internal

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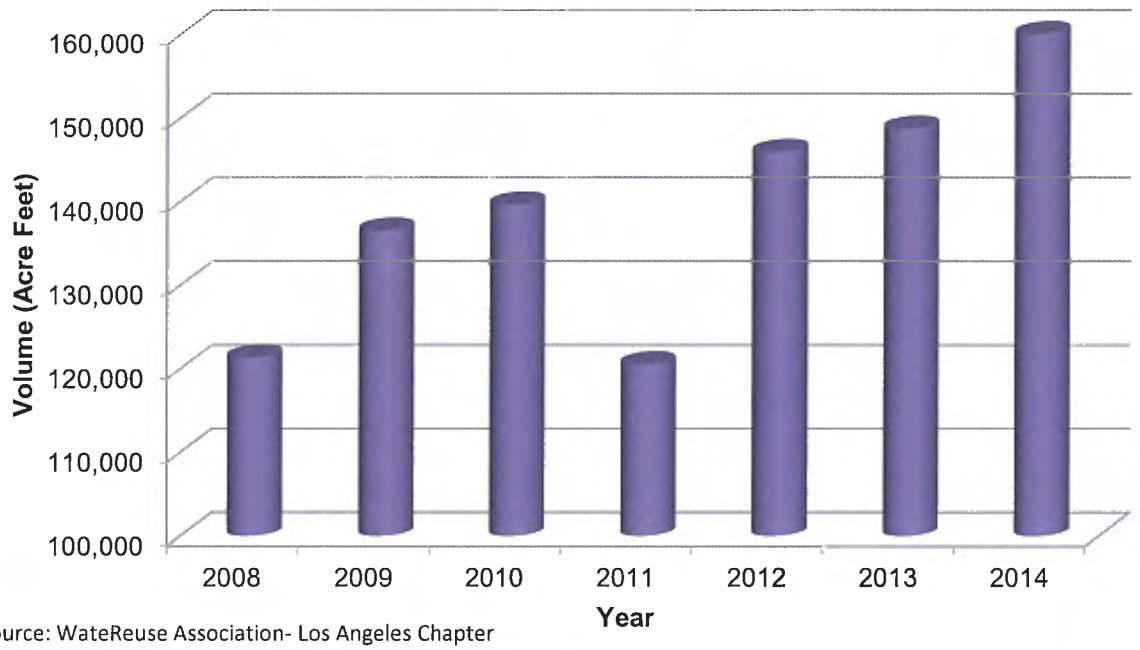

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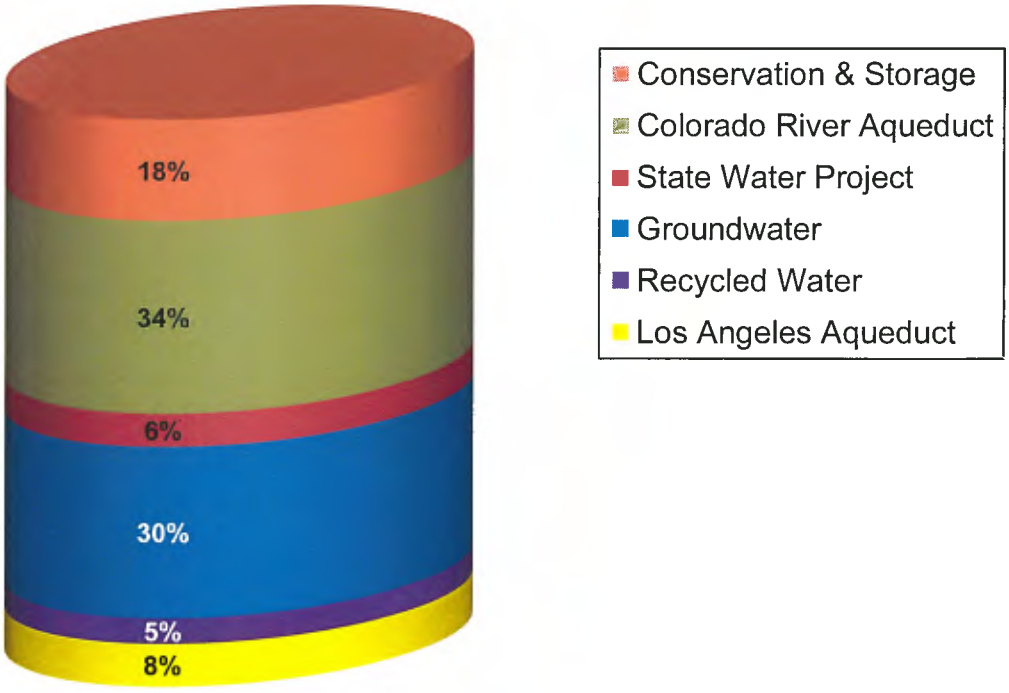

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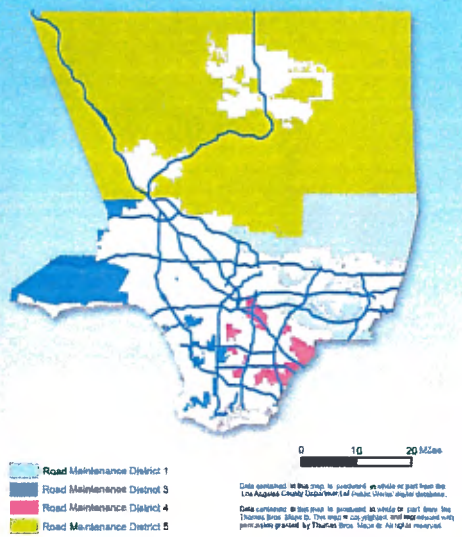

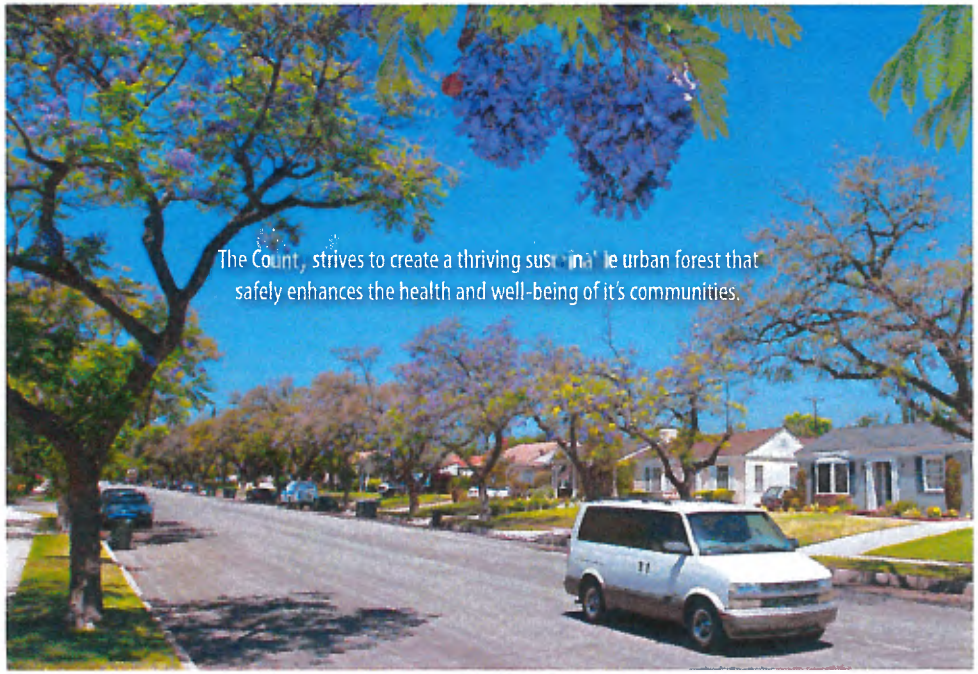

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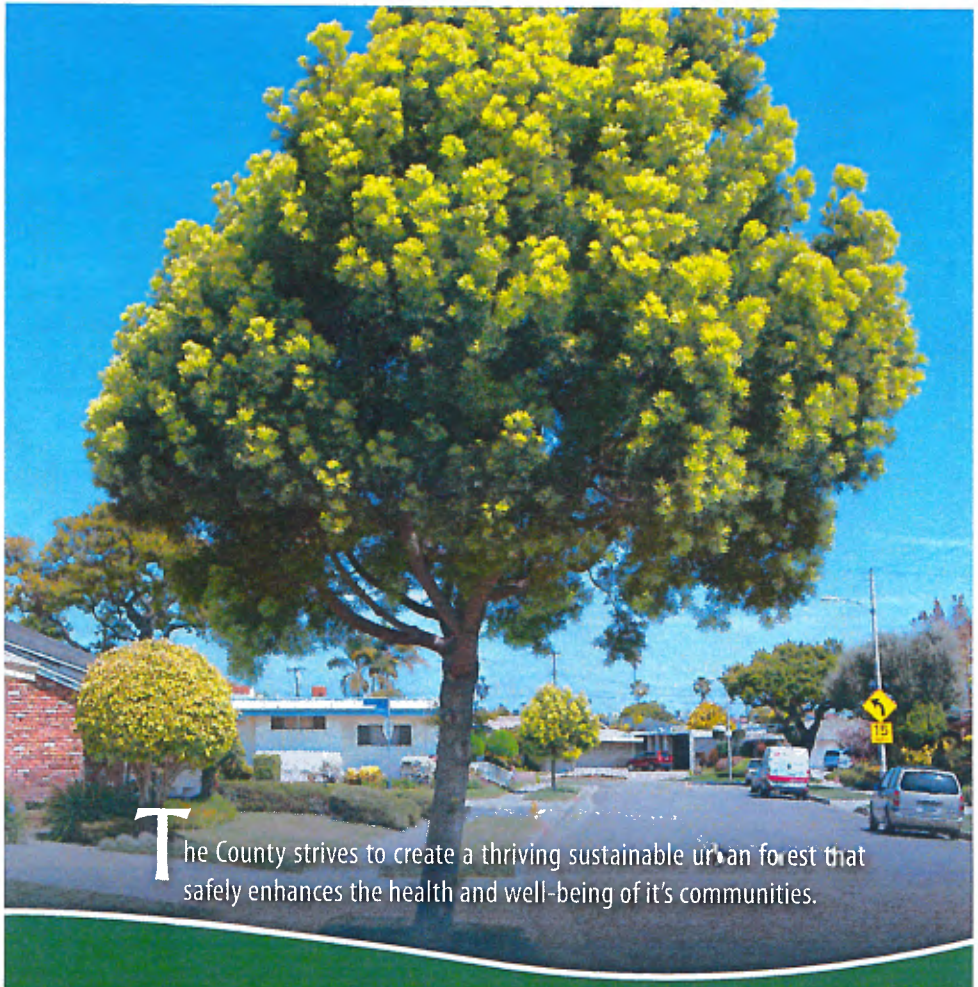


The County strives to create a thriving sustainable urban forest that safely enhances the health and well-being of it's communities.

Parkway and median trees are part of Los Angeles County's urban forest, which is an essential element of a healthy, livable community. A well-managed, thriving urban forest is vital to our region's future.

Since October 1983, Public Works has cared for and maintained over 170,000 parkway and median trees located throughout the County's unincorporated area along more than 3,000 miles of roadways. Public Works recently took over the maintenance of approximately 1,400 additional trees within road right of way in various Landscape Maintenance Districts.

Urban Forest Renewal

Creating a sustainable urban forest is only possible through a collaborative partnership with the communities the County serves.

How you can help:

- If you do not have a tree planted in the parkway in front of your home, request Public Works to plant one.
- Water the parkway tree in front of your home.
- Report concerns to Public Works about dead or dying parkway trees.

For more information on any of these items, please visit Public Works at dpw.lacounty.gov/rmd/parkways.

Challenges and Opportunities

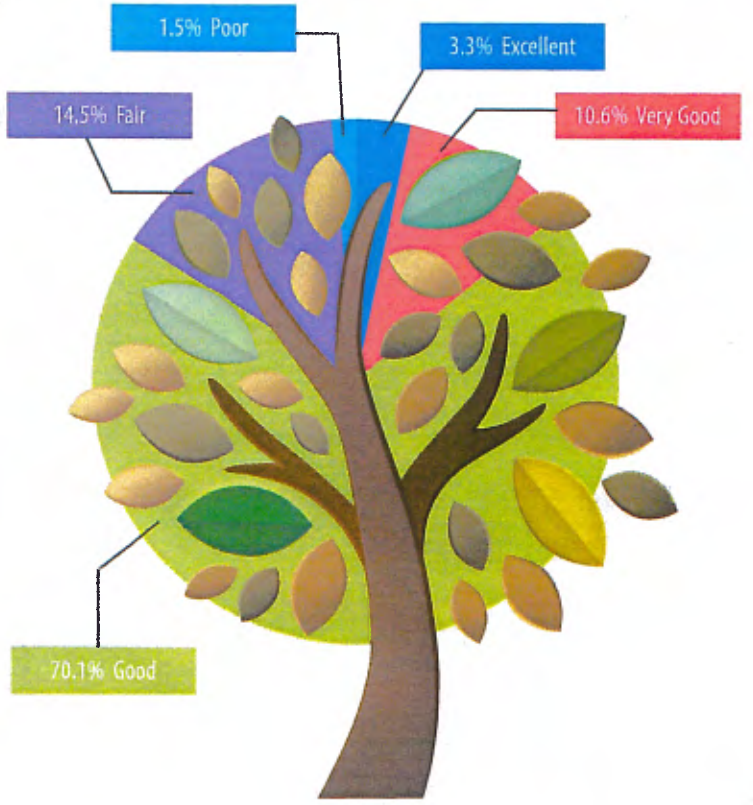
Many of the County's trees are reaching the end of their lives and are stressed due to lack of water caused by the State's drought. While the majority of the County's urban forest is in good to excellent condition, several of these factors have impacted the health of some of the trees which makes them susceptible to various pests and fungus infestations. Therefore, to better balance the health of the County's trees with it's goal of public safety, Public Works is increasing it's focus on urban forest renewal.

Trees are replanted routinely with species that are appropriate for the available space and other factors that complement the existing trees and the community when possible. Public Works takes advantage of drought tolerant species to help counteract the effects of climate change.

Benefits of a Healthy Urban Forest

* Clean air
* Heat reduction
* Stormwater capture
* Improved community walkability
* Increased property value
* Noise suppression
* Habitat for wildlife
* Increase well-being

Condition of Parkway Trees in Los Angeles County's Urban Forest



Trees were rated as being in poor condition and noted for continued monitoring if there was potential for recovery. Public Works will continue to evaluate those trees and upgrade their condition assessment if there is improvement or remove those than have declined in condition. The number of trees in poor condition are shown below for each of the Supervisorial Districts (SD) along with the corresponding percentage of the total number of trees in that SD.

SD1 – 330 trees (1.4%), SD2 – 430 trees (1.7%), SD3 – 275 trees (1.3%), SD4 – 320 trees (1.1%), SD5 – 1,110 trees (1.6%)

Condition ratings are performed prior to trees being trimmed.

JIM JONES
Director

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"To enrich lives through effective and caring service"

October 6, 2015

To: Department Heads

From: Dave Chittenden
Chief Deputy Director

Subject: **CAR WASH GUIDELINES**

On September 15, 2015, the Board passed a motion instructing the Interim CEO and the Director of ISD, in conjunction with the Directors of other County departments that maintain their own fleet, to develop a policy to limit car washing activity to at most once a month, with a report back in 30 days.

In coordination with the fleet managers representing the Sheriff, Fire and Public Works departments, we have developed the following guidelines in response to the above-referenced Board motion:

Car Wash Guidelines

County departments are asked to restrict water-based washes to a maximum of once per month. Water-based vehicle washes are limited to automated car washes that use re-circulated water or vehicle washing processes that utilize a maximum of 10 gallons of potable water. Alternative cleaning methods may be utilized such as dusters or dry wash. Exemptions to these guidelines should be made on a case-by-case basis and limited to the following criteria:

- Health and safety circumstances
- Emergency vehicles or apparatus that are frequently subjected to caustic and corrosive environments as well as off-highway operation.
- In situations to avoid sea salt/marine air corrosion.

We are also providing these guidelines, which represent best practices, to all County departments for observance.

If there are any questions, your designated staff may contact Marie Nunez, ISD's Division Manager over Fleet, at (323) 267-2492.

DC:JS/as

c: Chief Operating Officer
Chief Deputies
Administrative Deputies